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EXAMINER

CLEMENT, MICHELLE RENEE

ART UNIT	PAPER NUMBER
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3641

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Please find below and/or attached an Office communication concerning this application or proceeding.



## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 7/5/06 have been fully considered but they are not persuasive. In response to applicant's contention that Barr et al. does not disclose the claimed projectile, it is noted that the projectile of Barr et al. does disclose the claimed projectile, although the Barr et al. may give different terms to the elements than applicant does, the elements are still deemed the same. It is the cylindrical wall of applicant's projectile that is thinner than the forward end, which breaks prior to the forward end upon impact to absorb and dissipate impact energy; the same is true of Barr et al. It is the cylindrical wall of the projectile (i.e. along reference 55a), which breaks prior to the forward end (reference 53) upon impact to absorb energy and dissipate impact energy. It is the projectile (reference 51) of Barr et al. when viewed in its entirety that is viewed in comparison to applicants: it is elements 55 and 53 that comprise the cavity of Barr et al. It is also noted that the term *rigid* is a relative term, the material of Barr et al. (natural or synthetic rubber) is a rigid material in relation to the flowable material P. In response to applicant's argument that the foam material utilized by Kleine for the projectile could not be used by Barr et al., the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In response to applicant's allegation that Barr et al. does not have a rear plug wall joined to the cylindrical wall it is noted that the rear wall (reference 55c) is joined to the cylindrical walls

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(reference 55 (see especially figure 3)). In regards to applicant's arguments concerning the rearward extending cylinder of Barr et al. it is noted that the sabot (reference 31) and pusher disc (reference 41) can also be considered part of the projectile. Applicant's arguments are generally narrower than the current claims.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 14, 16, 18-23 and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barr et al. (US Patent # 3,911,824) and Klein (US Patent Application # 2004/0069177). Barr et al. discloses a non-lethal impact munition comprising a projectile comprising a projectile nose and a projectile base (Figure 2), the projectile separably joined to a propulsion shell (reference 21) comprising propulsion means (reference 29 and 26) to separate the projectile from the propulsion shell, the projectile nose composed of a frangible, rigid material characterized in that the projectile nose is crushed upon impact with a target in a manner that absorbs and dissipates energy of impact, the projectile nose comprising a cavity (reference 57), wherein the projectile nose has a rounded forward end (reference 53) and a cylindrical wall (reference 55), the cylindrical wall being thinner (reference 55a) than the forward end, such that the thinner cylindrical wall breaks prior to the forward end upon impact to absorb and dissipate impact energy. The munition comprising a payload (reference P) disposed within the cavity, wherein the payload is laterally dispersed from the cavity upon impact through the thinner

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cylindrical wall. The payload including a finely divided particulate or powder such as tear gas powder. The projectile nose further comprising a rear plug wall (reference 55c) joined to the cylindrical wall, the combination of the forward end, the cylindrical wall and the rear plug wall defining a nose cavity. Wherein the rear plug wall is joined to the projectile base. The projectile base comprises a forward wall joined to a cylindrical wall. The rear plug wall is joined to the forward wall of the projectile base. The propulsion shell comprising an annular forward wall (reference 21) having a forward shell rim, a shell base joined to the shell forward wall, and a propulsion cavity (reference 25) disposed in the shell base, the propulsion means being retained by the propulsion cavity, the projectile base comprising a forward wall joined to a cylindrical wall to define a projectile cavity and a rearward extending annular insertion flange, whereby the insertion flange is received within the shell rim and the shell forward wall such that the shell cavity and the projectile cavity are combined (i.e. area in Figure 1 between 41 and 23). The projectile nose is sufficiently rigid to maintain aerodynamic stability during flight but is sufficiently frangible to crush upon impact with a target in a manner that absorbs and dissipates energy of impact to reduce the energy transferred to such target by the projectile. Although Barr et al. does not expressly disclose the projectile nose composed of a polymer foam material, Klein does. Klein teaches a non-lethal projectile ammunition comprising a projectile comprising a projectile nose composed from Styrofoam (i.e. polymer foam), a projectile base and a payload comprising a chemical agent mixed with a marking powder. Barr et al. and Klein are analogous art because they are from the same field of endeavor: non-lethal projectiles. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the Styrofoam material for the nose as taught by Klein with the non-lethal projectile as taught by

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Barr et al. The suggestion/motivation for doing so would have been to obtain a non-lethal projectile that had adequate stiffness during flight as taught by Klein ¶ 49. Barr et al. and Klein disclose the claimed invention except for the foam material expressly having a density between approximately 8 and 14 pounds per cubic foot. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a foam material having the specific density, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

4. Claims 27 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barr (US Patent # 3,865,038), Barr et al. (US Patent # 3,911,824) and Klein (US Patent Application 2004/0069177). Barr discloses a non-lethal munition that can be carried and used in combination with a cartridge case carrying a propellant. The munition comprising a projectile comprising a projectile nose and a projectile base, the projectile base comprising a forward wall joined to a cylindrical wall to define a projectile cavity and a rearward extending annular insertion flange, whereby the insertion flange can be received within a shell rim, the projectile nose comprising a rear plug wall joined to a cylindrical wall and a forward end joined to the cylindrical wall, the combination of the forward end, the cylindrical wall and the rear plug defining a nose cavity, the projectile nose composed of a frangible rigid material and a payload disposed within the cavity of the projectile nose, whereby the payload is laterally dispersed from the projectile nose upon impact. Wherein the rear wall of the projectile nose is joined directly to the forward wall of the projectile base. Although Barr does not expressly disclose the specific propulsion shell, Barr et al. does. Barr et al. teaches a non-lethal munition comprising a

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projectile and cartridge/propulsion shell, the propulsion shell comprising an annular forward wall having a forward shell rim, a shell base joined to the shell forward wall and a propulsion cavity disposed in the shell base, the propulsion means retained by the propulsion cavity, whereby a flange of the projectile is received within the shell rim. Barr and Barr et al. are analogous art because they are from the same field of endeavor: non-lethal munitions. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cartridge as taught by Barr et al. with the projectile as taught by Barr. The suggestion/motivation for doing so can be found in the Abstract of Barr. Although neither Barr nor Barr et al. expressly disclose the projectile nose composed of a polymer foam material, Klein does. Klein teaches a non-lethal projectile ammunition comprising a projectile comprising a projectile nose composed from Styrofoam (i.e. polymer foam), a projectile base and a payload comprising a chemical agent mixed with a marking powder. Barr, Barr et al. and Klein are analogous art because they are from the same field of endeavor: non-lethal projectiles. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the Styrofoam material for the nose as taught by Klein with the non-lethal projectile as taught by Barr and Barr et al. The suggestion/motivation for doing so would have been to obtain a non-lethal projectile that that had adequate stiffness during flight as taught by Klein ¶ 49

### *Conclusion*

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. This application contains claims 1, 3, 6-10, 12, and 13 drawn to an invention nonelected with traverse in Paper No. 12/14/05, although treated as an election without traverse. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle (Shelley) Clement whose telephone number is 571.272.6884. The examiner can normally be reached on Monday thru Thursday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571.272.6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
MICHELLE CLEMENT  
PRIMARY EXAMINER